

NEWS 1 DEC 01 Web Page for STN Seminar Schedule - N. America  
NEWS 2 DEC 01 ChemPort single article sales feature unavailable  
NEWS 3 APR 03 CAS coverage of exemplified prophetic substances enhanced  
NEWS 4 APR 07 STN is raising the limits on saved answers  
NEWS 5 APR 24 CA/Caplus now has more comprehensive patent assignee information  
NEWS 6 APR 26 USPATFULL and USPAT2 enhanced with patent assignment/reassignment information  
NEWS 7 APR 28 CAS patent authority coverage expanded  
NEWS 8 APR 28 ENCOMPLIT/ENCOMPLIT2 search fields enhanced  
NEWS 9 APR 28 Limits doubled for structure searching in CAS REGISTRY  
NEWS 10 MAY 08 STN Express, Version 8.4, now available  
NEWS 11 MAY 11 STN on the Web enhanced  
NEWS 12 MAY 11 BEILSTEIN substance information now available on STN Easy  
NEWS 13 MAY 14 DGENE, PCTGEN and USGENE enhanced with increased limits for exact sequence match searches and introduction of free HIT display format  
NEWS 14 MAY 15 INPADOCDB and INPAFAMDB enhanced with Chinese legal status data  
NEWS 15 MAY 28 CAS databases on STN enhanced with NANO super role in records back to 1992  
NEWS 16 JUN 01 CAS REGISTRY Source of Registration (SR) searching enhanced on STN  
NEWS 17 JUN 26 NUTRACEUT and PHARMAML no longer updated  
NEWS 18 JUN 29 IMSCOPROFILE now reloaded monthly  
NEWS 19 JUN 29 EPFULL adds Simultaneous Left and Right Truncation (SLART) to AB, MCLM, and TI fields  
NEWS 20 JUL 09 PATDPAFULL adds Simultaneous Left and Right Truncation (SLART) to AB, CLM, MCLM, and TI fields  
NEWS 21 JUL 14 USGENE enhances coverage of patent sequence location (PSL) data  
NEWS 22 JUL 27 CA/Caplus enhanced with new citing references  
NEWS 23 JUL 16 GBFULL adds patent backfile data to 1855  
NEWS 24 JUL 21 USGENE adds bibliographic and sequence information  
NEWS 25 JUL 28 EPFULL adds first-page images and applicant-cited references  
NEWS 26 JUL 28 INPADOCDB and INPAFAMDB add Russian legal status data  
NEWS EXPRESS MAY 26 09 CURRENT WINDOWS VERSION IS V8.4,  
AND CURRENT DISCOVER FILE IS DATED 06 APRIL 2009.

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FILE 'HOME' ENTERED AT 14:59:26 ON 05 AUG 2009

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COST IN U.S. DOLLARS  
FULL ESTIMATED COST

	SINCE FILE ENTRY	TOTAL SESSION
	0.22	0.22

FILE 'REGISTRY' ENTERED AT 14:59:43 ON 05 AUG 2009  
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STRUCTURE FILE UPDATES: 4 AUG 2009 HIGHEST RN 1172694-04-0  
DICTIONARY FILE UPDATES: 4 AUG 2009 HIGHEST RN 1172694-04-0

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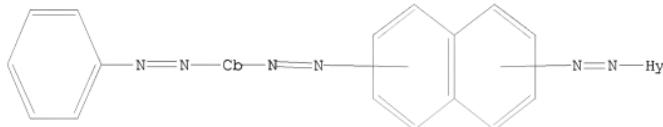
REGISTRY includes numerically searchable data for experimental and  
predicted properties as well as tags indicating availability of  
experimental property data in the original document. For information  
on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

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SAMPLE SCREEN SEARCH COMPLETED - 1384 TO ITERATE

100.0% PROCESSED 1384 ITERATIONS 5 ANSWERS  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
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PROJECTED ANSWERS: 5 TO 234

L2 5 SEA SSS SAM L1

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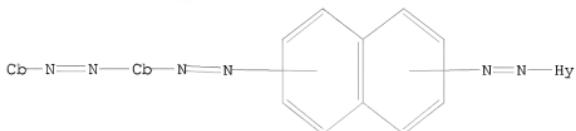
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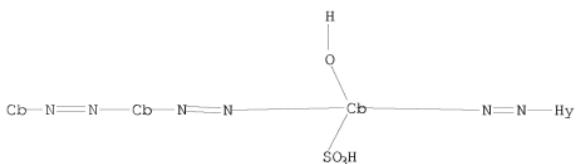
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L7 STR



Structure attributes must be viewed using STN Express query preparation.

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SEARCH TIME: 00.00.01
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FILE 'CAPLUS' ENTERED AT 15:10:26 ON 05 AUG 2009
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FILE COVERS 1907 - 5 Aug 2009 VOL 151 ISS 6
FILE LAST UPDATED: 4 Aug 2009 (20090804/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2009
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CAPLUS now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2009.

CAS Information Use Policies apply and are available at:

<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate substance identification.

The ALL, BIB, MAX, and STD display formats in the CA/CAPLUS family of databases have been updated to include new citing references information. This enhancement may impact record import into database management software. For additional information, refer to NEWS 22.

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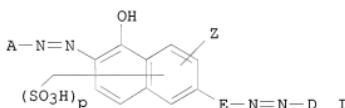
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L9 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2007:173868 CAPLUS
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DOCUMENT NUMBER: 146:230985  
 TITLE: Process for printing an image on a substrate, composition and azo dye compound for use in the composition  
 INVENTOR(S): Monahan, Lilian; Double, Philip John; Bradbury, Roy  
 PATENT ASSIGNEE(S): Fujifilm Imaging Colorants Limited, UK  
 SOURCE: PCT Int. Appl., 50 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

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WO 2007017631	A2	20070215	WO 2006-GB2862	20060731
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RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BE, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA				
EP 1915431	A2	20080430	EP 2006-765174	20060731
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR				
JP 2009504831	T	20090205	JP 2008-525613 GB 2005-16243 GB 2005-16244 WO 2006-GB2862	20060731 A 20050808 A 20050808 W 20060731
PRIORITY APPLN. INFO.:				

OTHER SOURCE(S): MARPAT 146:230985

GI



AB A process for printing an image on a substrate with high d. and good lightfastness, comprising applying to the substrate an ink composition which comprises a liquid medium and a compound of formula I; wherein: A and D each independently represent optionally substituted aryl or optionally substituted heteroaryl; E represents optionally substituted pyrazolyl; Z represents H, halogen, nitro, cyano, hydroxy, amino, carboxy, optionally substituted alkyl, optionally substituted alkoxy or optionally substituted aryloxy; and p is an integer from 0 to 5; provided that E does not have an optionally substituted carbonamide group of formula -CONR1R2 directly attached to it, wherein R1 and R2 each independently represent H, optionally substituted alkyl, optionally substituted cycloalkyl, or optionally substituted aryl. The printing is preferably ink jet printing. Also provided are compds. of formula I and ink compns. containing the same.

IT 924311-51-3 924311-52-4 924311-53-5

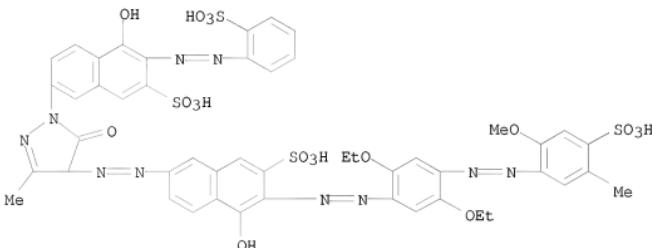
924311-54-6 924311-55-7 924311-56-8

924311-57-9 924311-58-0

RL: TEM (Technical or engineered material use); USES (Uses)  
(dye; manufacture of diazo naphthalene compds. and compns. for use in  
ink-jet printing)

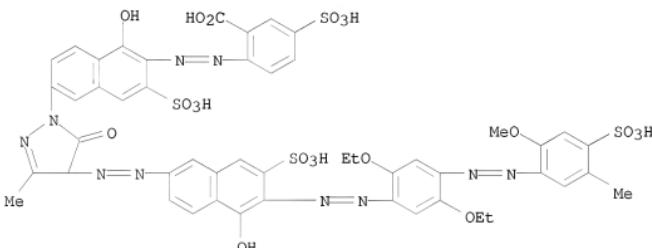
RN 924311-51-3 CAPLUS

CN 2-Naphthalenesulfonic acid, 3-[2-[2,5-diethoxy-4-[2-(2-methoxy-5-methyl-4-sulfophenyl)diaz恒基]phenyl]diazenyl]-7-[2-[4,5-dihydro-1-[5-hydroxy-7-sulfo-6-[2-(2-sulfophenyl)diaz恒基]-2-naphthalenyl]-3-methyl-5-oxo-1H-pyrazol-4-yl]diazenyl]-4-hydroxy- (CA INDEX NAME)



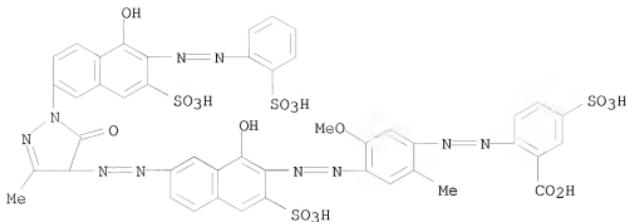
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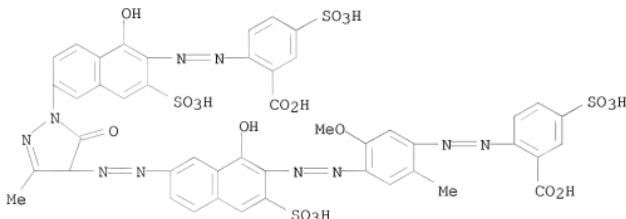
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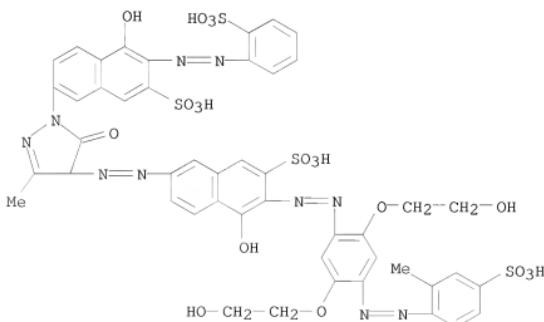
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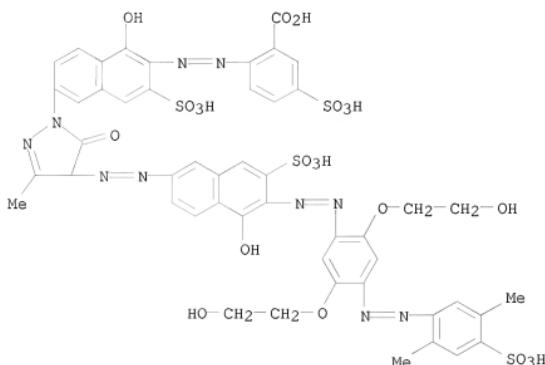
RN 924311-55-7 CAPLUS

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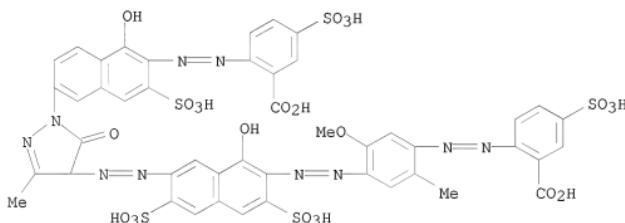
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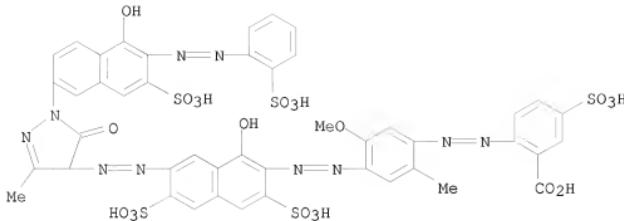
RN 924311-57-9 CAPLUS

CN Benzoic acid, 2-[4-[2-[7-[2-[1-[6-[2-(2-carboxy-4-sulfophenyl)diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]-4,5-dihydro-3-methyl-5-oxo-1H-pyrazol-4-yl]diazenyl]-1-hydroxy-3,6-disulfo-2-naphthalenyl]diazenyl]-5-methoxy-2-methylphenyl]diazenyl]-5-sulfo- (CA INDEX NAME)



RN 924311-58-0 CAPLUS

CN Benzoic acid, 2-[2-[4-[2-[7-[2-[4,5-dihydro-1-[5-hydroxy-7-sulfo-6-[2-(2-sulfophenyl)diazenyl]-2-naphthalenyl]-3-methyl-5-oxo-1H-pyrazol-4-yl]diazenyl]-1-hydroxy-3,6-disulfo-2-naphthalenyl]diazenyl]-5-methoxy-2-methylphenyl]diazenyl]-5-sulfo- (CA INDEX NAME)



L9 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2005:490398 CAPLUS

DOCUMENT NUMBER: 143:28079

TITLE: Trisazo-dyestuffs for use as dyes and ink-jet inks

INVENTOR(S): Mistry, Prahalad Manibhai; Bradbury, Roy

PATENT ASSIGNEE(S): A vecia Inkjet Limited, UK

SOURCE: PCT Int. Appl., 59 pp.

CODEN: PIXXD2

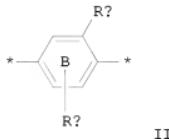
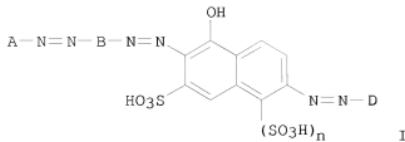
DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

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WO 2005052065	A1	20050609	WO 2004-GB4868	20041118
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EP 1697467	A1	20060906	EP 2004-798583	20041118
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JP 2007517082	T	20070628	JP 2006-540590	20041118
US 20070062409	A1	20070322	US 2006-579783	20060518
PRIORITY APPLN. INFO.:				
OTHER SOURCE(S):	MARPAT 143:28079			
GI				



AB The invention relates to a compound of formula (I) or salt thereof: wherein A is optionally substituted Ph or naphthyl; B is optionally substituted phenylene or naphthylene; n is 0 or 1; and D is a pyrazolyl group, with the proviso that when A is an optionally substituted Ph group and B is a phenylene group of formula: (II); wherein Ra is OH or a C1-4-alkoxy group; and Rb is H or a C1-4-alkyl group, hydroxy group, C1-4-alkoxy group, C1-3-dialkyamino group or a group of the formula NHCORc (wherein Rc is C1-3-alkyl or an amino group); and \* shows the point of attachment to the azo linkages on B in formula (I); A is free from nitro groups. Also, claimed are compds., compns. and ink-jet cartridges for use in an ink-jet printer and substrate printed with an ink-jet printer.

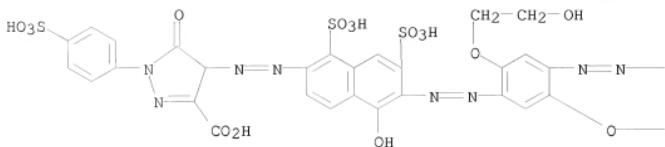
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 852910-03-3P 852910-04-4P 852910-05-5P  
 852910-06-6P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

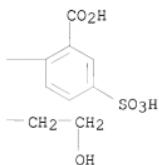
(preparation of trisazo-dyestuffs for use as dyes and ink-jet inks)

RN 852909-45-6 CAPTOL  
 CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(2-carboxy-4-sulfophenyl)diazeny1]-2,5-bis(2-hydroxyethoxy)phenyl]diazeny1]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazeny1]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)-(CA INDEX NAME)

PAGE 1-A



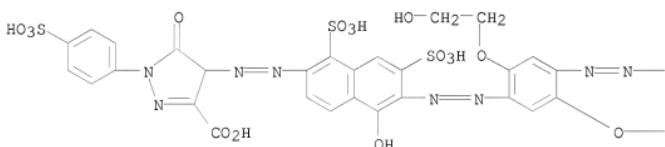
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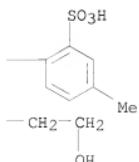
RN 852909-46-7 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(4-methyl-2-sulfophenyl)diazaryl]phenyl]diazaryl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazaryl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)-1H-pyrazole-3-carboxylic acid (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

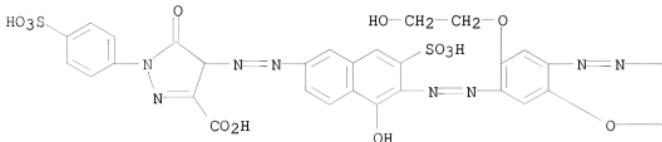


RN 852909-47-8 CAPLUS

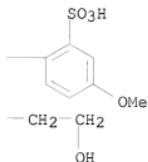
CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(4-methyl-2-sulfophenyl)diazaryl]phenyl]diazaryl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazaryl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)-1H-pyrazole-3-carboxylic acid (CA INDEX NAME)

(4-methoxy-2-sulfophenyl)diazenyl]phenyl)diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl)diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

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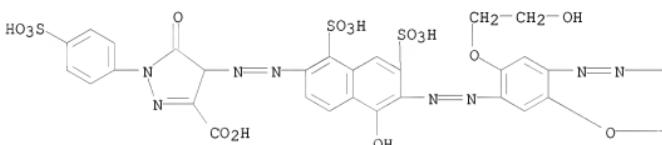
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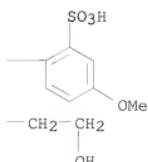
RN 852909-48-9 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(4-methoxy-2-sulfophenyl)diazenyl]phenyl)diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl)diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

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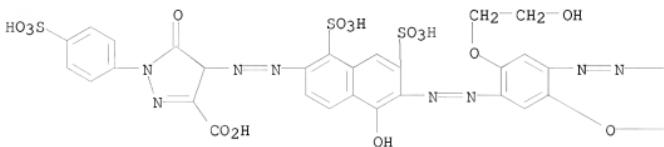
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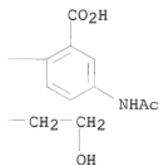
RN 852909-49-0 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-[4-(acetylamino)-2-carboxyphenyl]diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)-(CA INDEX NAME)

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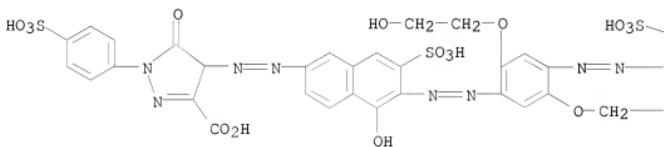
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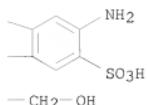
RN 852909-50-3 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(4-amino-2,5-disulfophenyl)diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)-(CA INDEX NAME)

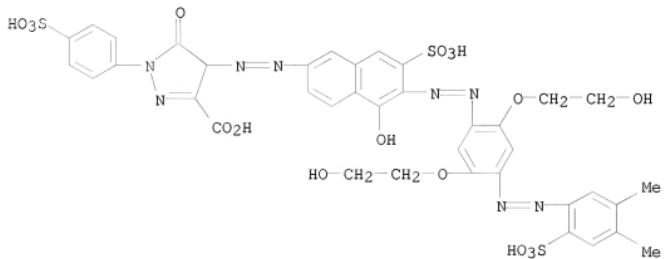
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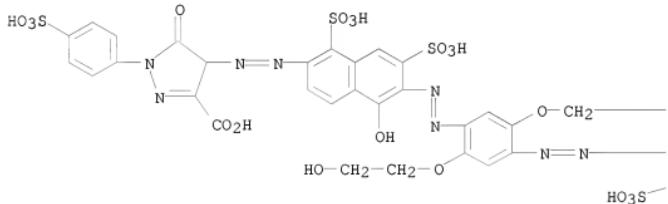


RN 852909-51-4 CAPLUS  
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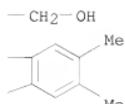


RN 852909-52-5 CAPLUS  
 CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(4,5-dimethyl-2-sulfophenyl)diaz恒基]-2,5-bis(2-hydroxyethoxy)phenyl]diaz恒基]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diaz恒基]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)-(CA INDEX NAME)

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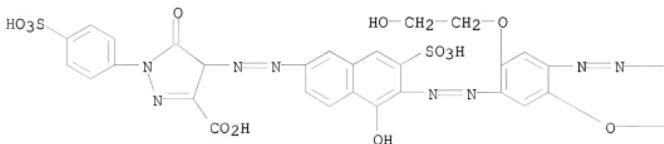
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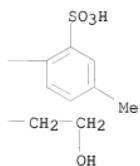
RN 852909-53-6 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(4-methyl-2-sulfophenyl)diazenyl]phenyl)diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

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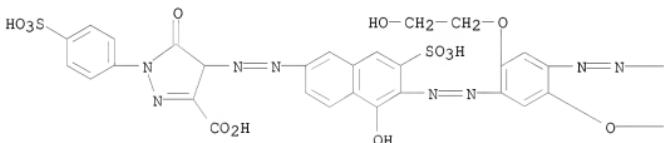
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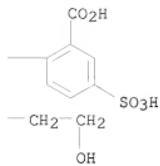


RN 852909-54-7 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(2-carboxy-4-sulfophenyl)diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl)diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

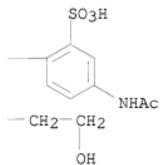
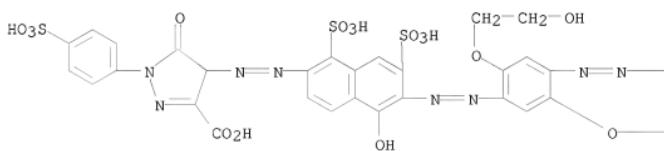
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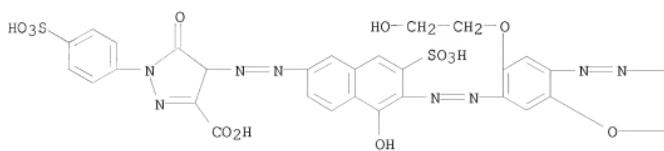
RN 852909-55-8 CAPLUS

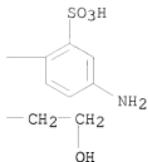
CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-(acetylamino)-2-sulfophenyl]diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)



RN 852909-56-9 CAPLUS

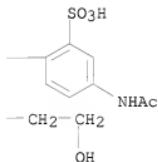
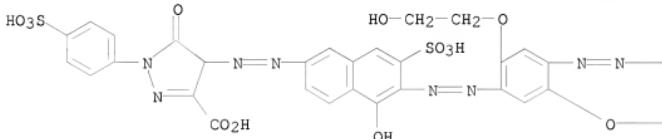
CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-(2-(4-amino-2-sulfophenyl)diazenyl)-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)





RN 852909-57-0 CAPLUS

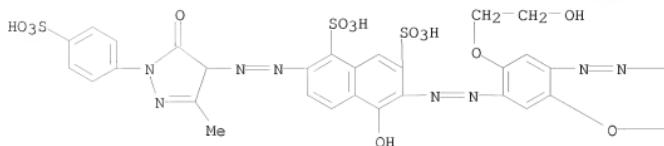
CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-[4-(acetylamino)-2-sulfophenyl]diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)



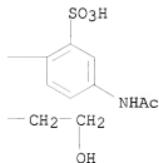
RN 852909-58-1 CAPLUS

CN 1,7-Naphthalenedisulfonic acid, 6-[2-[4-[2-[4-(acetylamino)-2-sulfophenyl]diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-2-[2-(4,5-dihydro-3-methyl-5-oxo-1-(4-sulfophenyl)-1H-pyrazol-4-yl]diazenyl]-5-hydroxy- (CA INDEX NAME)

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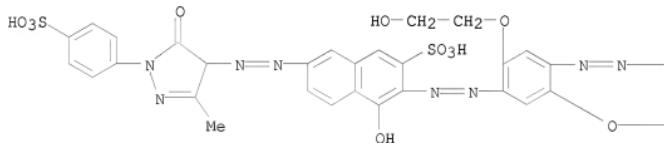
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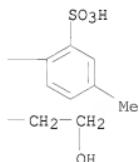
RN 852909-59-2 CAPLUS

CN 2-Naphthalenesulfonic acid, 3-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(4-methyl-2-sulfophenyl)diazenyl]phenyl]diazenyl]-7-[2-[4,5-dihydro-3-methyl-5-oxo-1-(4-sulfophenyl)-1H-pyrazol-4-yl]diazenyl]-4-hydroxy- (CA INDEX NAME)

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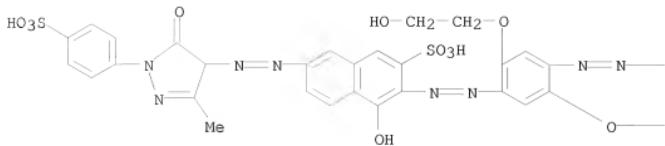
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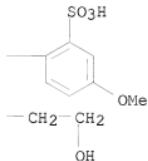
RN 852909-60-5 CAPLUS

CN 2-Naphthalenesulfonic acid, 3-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(4-methoxy-2-sulfophenyl)diazenyl]phenyl]diazenyl]-7-[2-[4,5-dihydro-3-methyl-5-oxo-1-(4-sulfophenyl)-1H-pyrazol-4-yl]diazenyl]-4-hydroxy- (CA INDEX NAME)

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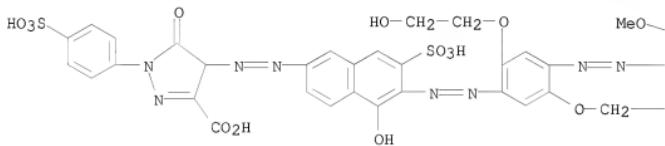
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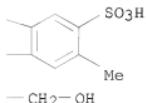
RN 852909-61-6 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(2-methoxy-5-methyl-4-sulfophenyl)diazenyl]phenyl]diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

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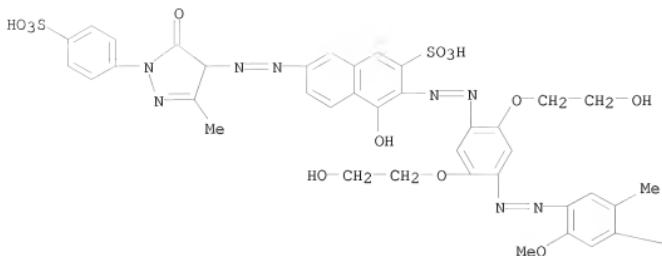


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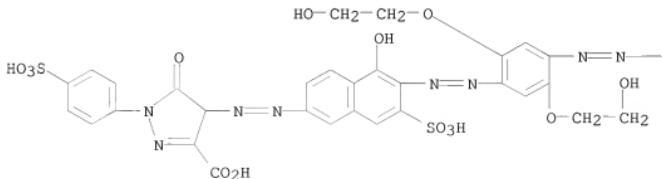
RN 852909-62-7 CAPLUS

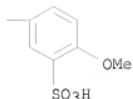
CN 2-Naphthalenesulfonic acid, 3-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(2-methoxy-5-methyl-4-sulfophenyl)diazenyl]phenyl]diazenyl]-7-[2-[4,5-dihydro-3-methyl-5-oxo-1-(4-sulfophenyl)-1H-pyrazol-4-yl]diazenyl]-4-hydroxy- (CA INDEX NAME)



— SO<sub>3</sub>H

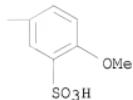
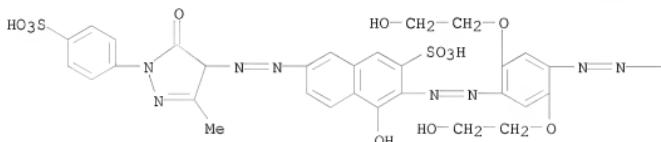
RN 852909-63-8 CAPLUS  
 CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(4-methoxy-3-sulfophenyl)diazenyl]phenyl]diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)





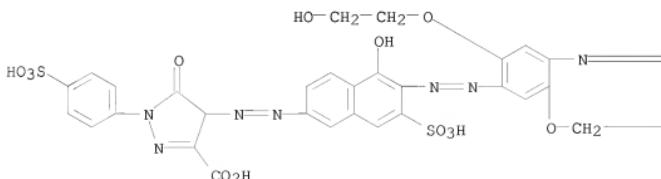
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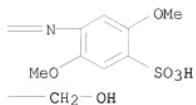
CN 2-Naphthalenesulfonic acid, 3-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(4-methoxy-3-sulphophenyl)diazenyl]phenyl]diazenyl]-7-[2-[4,5-dihydro-3-methyl-5-oxo-1-(4-sulphophenyl)-1H-pyrazol-4-yl]diazenyl]-4-hydroxy- (CA INDEX NAME)



RN 852909-65-0 CAPLUS

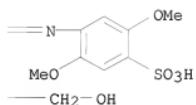
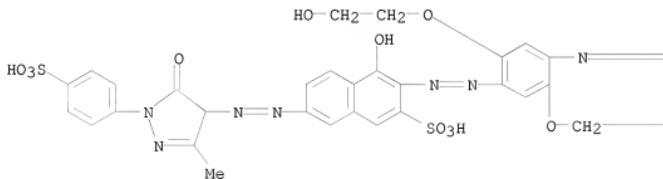
CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(2,5-dimethoxy-4-sulphophenyl)diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulphophenyl)- (CA INDEX NAME)





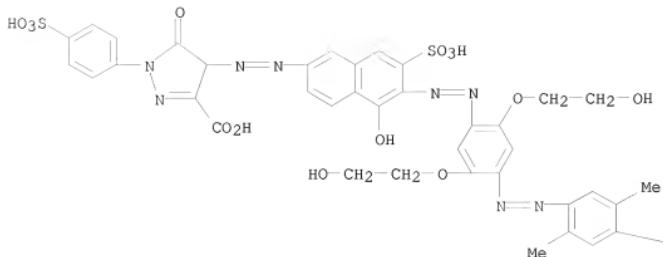
RN 852909-66-1 CAPLUS

CN 2-Naphthalenesulfonic acid, 7-[2-[4,5-dihydro-3-methyl-5-oxo-1-(4-sulfophenyl)-1H-pyrazol-4-yl]diazenyl]-3-[2-[4-[2-(2,5-dimethoxy-4-sulfophenyl)diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-4-hydroxy- (CA INDEX NAME)



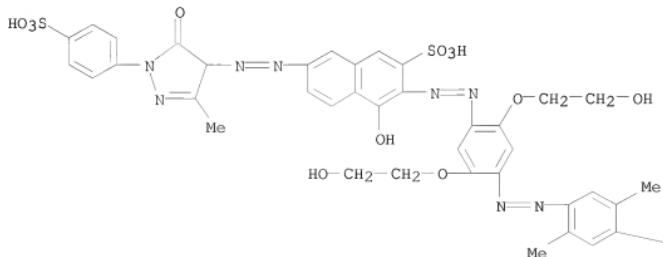
RN 852909-67-2 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(2,5-dimethyl-4-sulfophenyl)diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

— SO<sub>3</sub>H

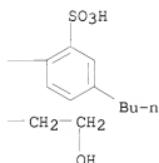
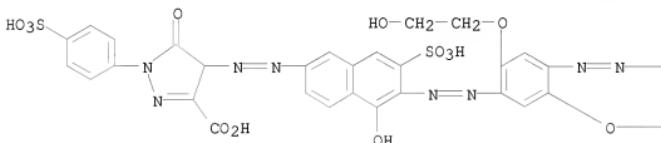
RN 852909-68-3 CAPLUS

CN 2-Naphthalenesulfonic acid, 7-[2-[4,5-dihydro-3-methyl-5-oxo-1-(4-sulfophenyl)-1H-pyrazol-4-yl]diazenyl]-3-[2-[4-[2-(2,5-dimethyl-4-sulfophenyl)diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-4-hydroxy-  
(CA INDEX NAME)



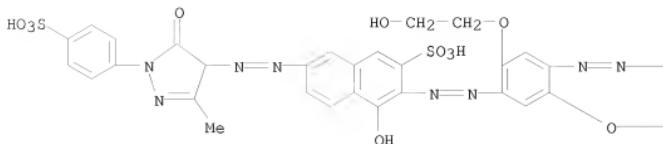
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RN 852909-69-4 CAPLUS  
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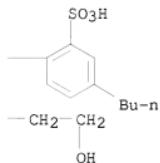


RN 852909-70-7 CAPLUS  
 CN 2-Naphthalenesulfonic acid, 3-[2-[4-[2-(4-butyl-2-sulfophenyl)diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl)diazenyl]-7-[2-[4,5-dihydro-3-methyl-5-oxo-1-(4-sulfophenyl)-1H-pyrazol-4-yl]diazenyl]-4-hydroxy- (CA INDEX NAME)

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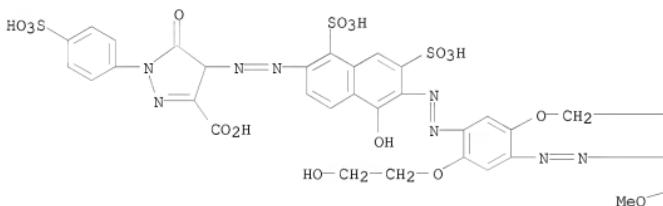
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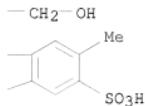


RN 852909-71-8 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[5-bis(2-hydroxyethoxy)-4-[2-(2-methoxy-5-methyl-4-sulfophenyl)diazenyl]phenyl]diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

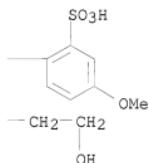
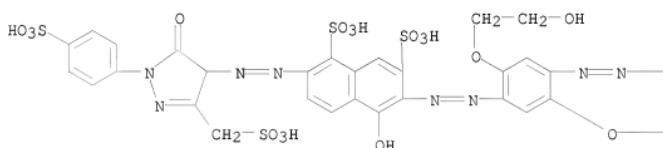
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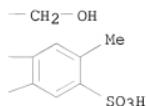
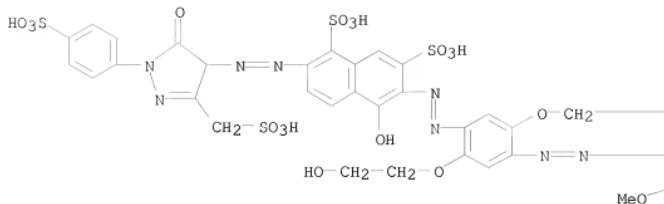
RN 852909-72-9 CAPLUS

CN 1,7-Naphthalenedisulfonic acid, 6-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(4-methoxy-2-sulfophenyl)diazenyl]phenyl)diazenyl]-2-[2-(4,5-dihydro-5-oxo-3-(sulfomethyl)-1-(4-sulfophenyl)-1H-pyrazol-4-yl)diazenyl]-5-hydroxy- (CA INDEX NAME)



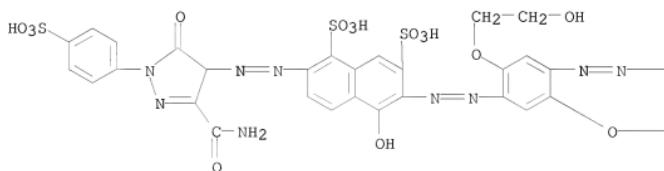
RN 852909-73-0 CAPLUS

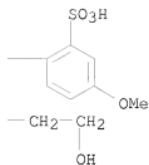
CN 1,7-Naphthalenedisulfonic acid, 6-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(2-methoxy-5-methyl-4-sulfophenyl)diazenyl]phenyl)diazenyl]-2-[2-(4,5-dihydro-5-oxo-3-(sulfomethyl)-1-(4-sulfophenyl)-1H-pyrazol-4-yl)diazenyl]-5-hydroxy- (CA INDEX NAME)



RN 852909-74-1 CAPLUS

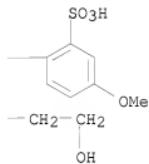
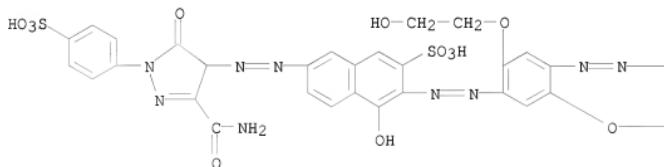
CN 1,7-Naphthalenedisulfonic acid, 2-[2-[3-(aminocarbonyl)-4,5-dihydro-5-oxo-1-(4-sulfophenyl)-1H-pyrazol-4-yl]diazenyl]-6-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(4-methoxy-2-sulfophenyl)diazenyl]phenyl]diazenyl]-5-hydroxy- (CA INDEX NAME)





RN 852909-75-2 CAPLUS

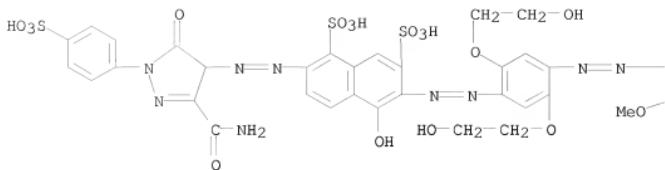
CN 2-Naphthalenesulfonic acid, 7-[2-[3-(aminocarbonyl)-4,5-dihydro-5-oxo-1-(4-sulfophenyl)-1H-pyrazol-4-yl]diazenyl]-3-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(4-methoxy-2-sulfophenyl)diazenyl]phenyl]diazenyl]-4-hydroxy- (CA INDEX NAME)



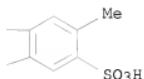
RN 852909-76-3 CAPLUS

CN 1,7-Naphthalenedisulfonic acid, 2-[2-[3-(aminocarbonyl)-4,5-dihydro-5-oxo-1-(4-sulfophenyl)-1H-pyrazol-4-yl]diazenyl]-6-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(2-methoxy-5-methyl-4-sulfophenyl)diazenyl]phenyl]diazenyl]-5-hydroxy- (CA INDEX NAME)

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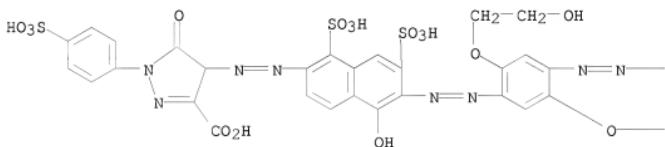


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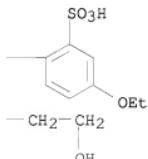


RN 852909-77-4 CAPLUS  
CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(4-ethoxy-2-sulfophenyl)diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)-(CA INDEX NAME)

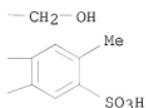
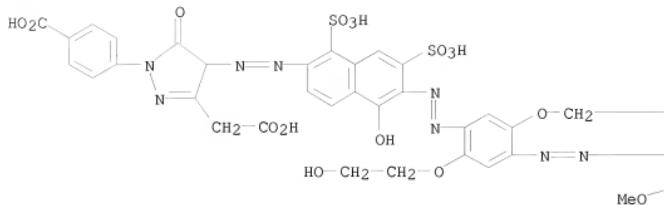
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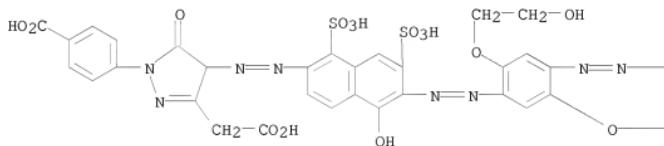


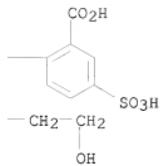
RN 852909-78-5 CAPLUS  
CN 1H-Pyrazole-3-acetic acid, 4-[2-[6-[2,5-bis(2-hydroxyethoxy)-4-[2-(2-methoxy-5-methyl-4-sulfophenyl)diazenyl]phenyl]diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazenyl]-1-(4-carboxyphenyl)-4,5-dihydro-5-oxo-(CA INDEX NAME)



RN 852909-79-6 CAPLUS

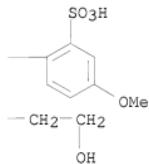
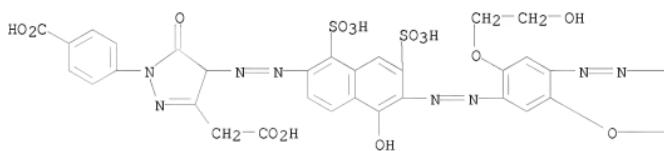
CN 1H-Pyrazole-3-acetic acid, 1-(4-carboxyphenyl)-4-[2-[6-[2-[4-[2-(2-carboxy-4-sulfophenyl)diaz恒y]2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo- (CA INDEX NAME)





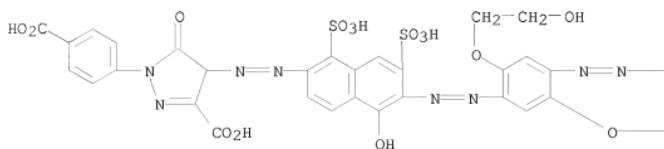
RN 852909-80-9 CAPLUS

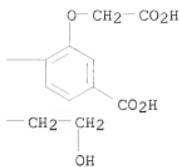
CN 1H-Pyrazole-3-acetic acid, 4-[2-[6-[2-[5-bis(2-hydroxyethoxy)-4-[2-(4-methoxy-2-sulfophenoxy)diazenyl]phenyl]diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazenyl]-1-(4-carboxyphenyl)-4,5-dihydro-5-oxo- (CA INDEX NAME)



RN 852909-81-0 CAPLUS

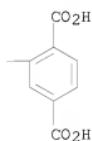
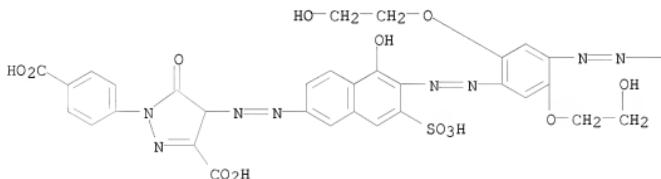
CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-[4-carboxy-2-(carboxymethoxy)phenyl]diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazenyl]-1-(4-carboxyphenyl)-4,5-dihydro-5-oxo- (CA INDEX NAME)





RN 852909-82-1 CAPLUS

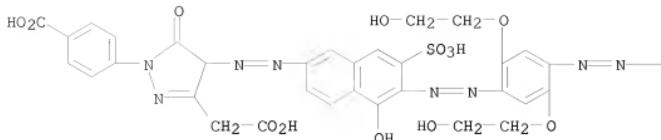
CN 1,4-Benzenedicarboxylic acid, 2-[2-[4-[2-[6-[2-[3-carboxy-1-(4-carboxyphenyl)-4,5-dihydro-5-oxo-1H-pyrazol-4-yl]diazenyl]-1-hydroxy-3-sulfo-2-naphthalenyl]diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-  
(CA INDEX NAME)



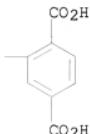
RN 852909-83-2 CAPLUS

CN 1,4-Benzenedicarboxylic acid, 2-[2-[4-[2-[6-[2-[3-(carboxymethyl)-1-(4-carboxyphenyl)-4,5-dihydro-5-oxo-1H-pyrazol-4-yl]diazenyl]-1-hydroxy-3-sulfo-2-naphthalenyl]diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-  
(CA INDEX NAME)

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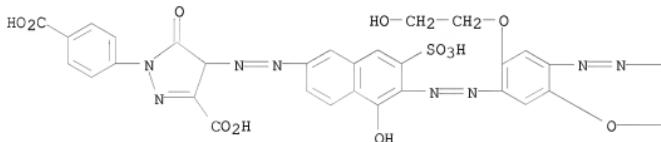
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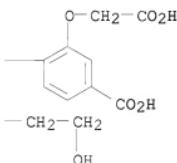
RN 852909-84-3 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-[4-carboxy-2-(carboxymethoxy)phenyl]diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-1-(4-carboxyphenyl)-4,5-dihydro-5-oxo- (CA INDEX NAME)

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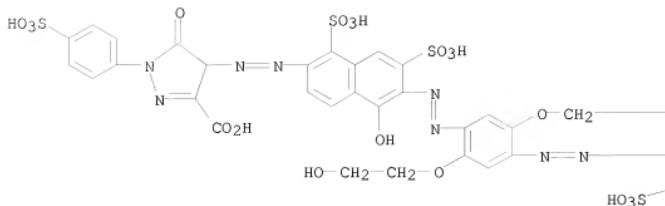


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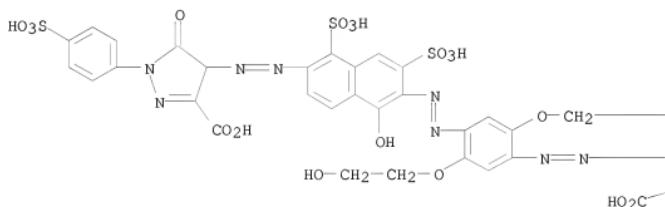


RN 852909-86-5 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2,5-bis(2-hydroxyethoxy)-4-[2-(2-sulfophenyl)diazenyl]phenyl]diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

—CH<sub>2</sub>—OH

RN 852909-87-6 CAPLUS  
 CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(2-carboxyphenyl)diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)— (CA INDEX NAME)

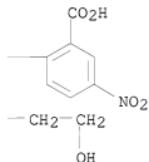
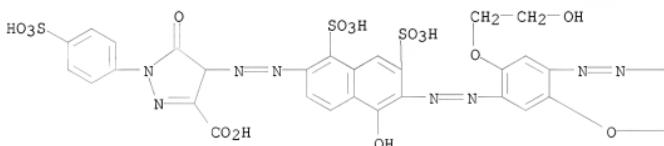


—CH<sub>2</sub>—OH



RN 852909-88-7 CAPLUS

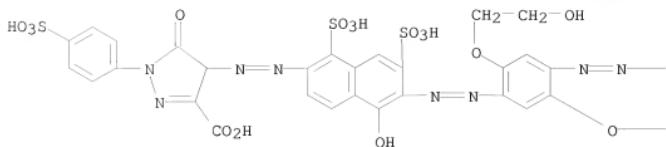
CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(2-carboxy-4-nitrophenyl)diaz恒y]l]-2,5-bis(2-hydroxyethoxy)phenyl]diaz恒y]l]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diaz恒y]l]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)-(CA INDEX NAME)



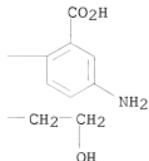
RN 852909-89-8 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(4-amino-2-carboxyphenyl)diaz恒y]l]-2,5-bis(2-hydroxyethoxy)phenyl]diaz恒y]l]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diaz恒y]l]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)-(CA INDEX NAME)

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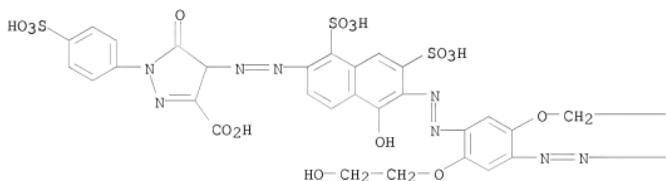
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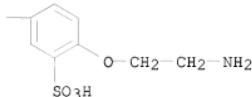


RN 852909-90-1 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-[4-(2-aminoethoxy)-3-sulfophenyl]diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)-(CA INDEX NAME)

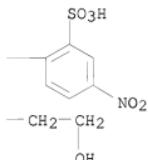
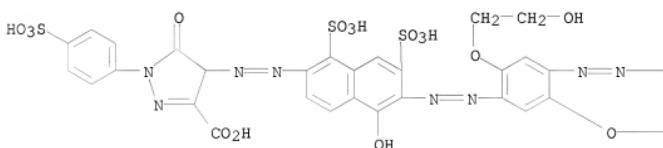
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$\text{---CH}_2\text{---OH}$ 

RN 852909-91-2 CAPLUS

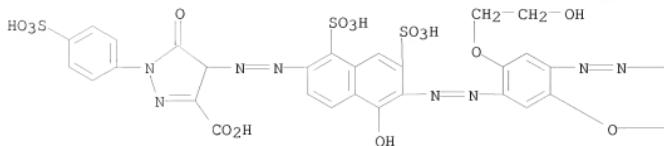
CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[2,5-bis(2-hydroxyethoxy)-4-(4-nitro-2-sulfophenyl)diazaryl]phenyl]diazaryl]-5-hydroxy-1,7-disulfo-2-naphthalenyl)diazaryl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)



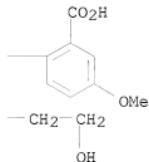
RN 852909-92-3 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(2-carboxy-4-methoxyphenyl)diazaryl]-2,5-bis(2-hydroxyethoxy)phenyl]diazaryl]-5-hydroxy-1,7-disulfo-2-naphthalenyl)diazaryl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

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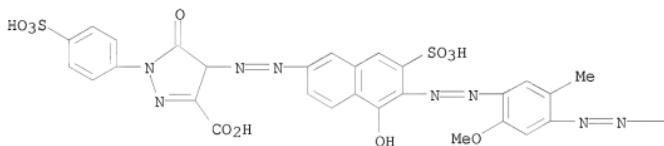
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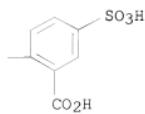
RN 852909-93-4 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(2-carboxy-4-sulfophenyl)diaz恒基]-2-methoxy-5-methylphenyl]diaz恒基]-5-hydroxy-7-sulfo-2-naphthalenyl]diaz恒基]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

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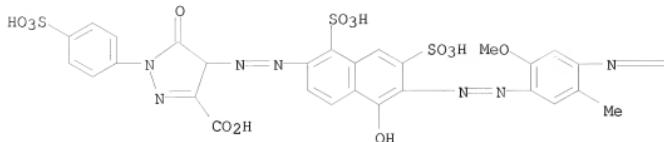


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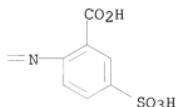
CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(2-carboxy-4-sulfophenyl)diaz恒基]-2-methoxy-5-methylphenyl]diaz恒基]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diaz恒基]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

INDEX NAME)

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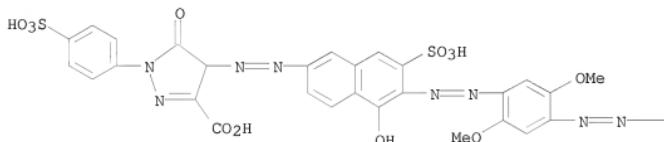


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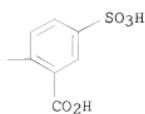


RN 852909-95-6 CAPLUS  
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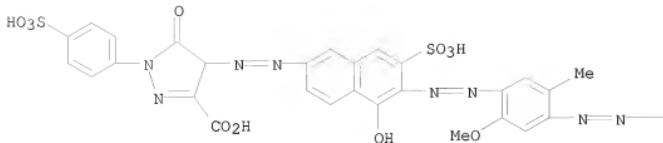
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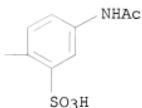
RN 852909-96-7 CAPLUS  
CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-[4-(acetylamino)-2-sulfophenyl]diazenyl]-2-methoxy-5-methylphenyl]diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

NAME)

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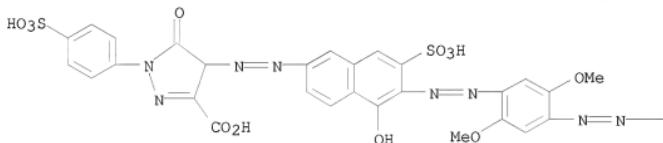
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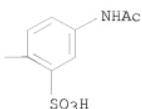
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CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-[4-(acetylamino)-2-sulfophenyl]diazenyl]-2,5-dimethoxyphenyl]diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

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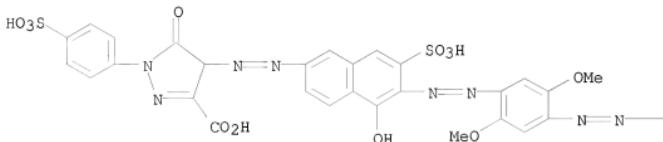
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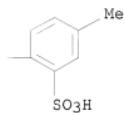
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CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[2,5-dimethoxy-4-[2-(4-methyl-2-sulfophenyl)diaz恒基]phenyl]diaz恒基]-5-hydroxy-7-sulfo-2-naphthalenyl]diaz恒基]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

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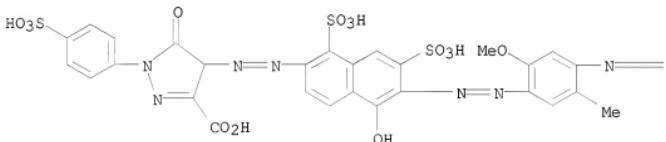
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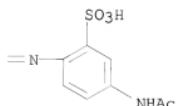
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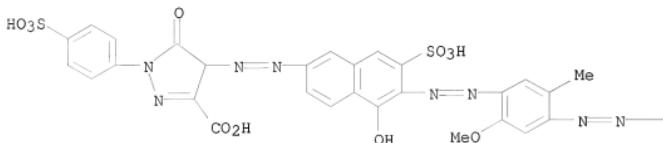
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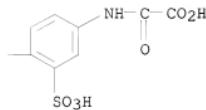
RN 852910-00-0 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-[4-[(carboxycarbonyl)amino]-2-sulfophenyl]diazenyl]-2-methoxy-5-methylphenyl]diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

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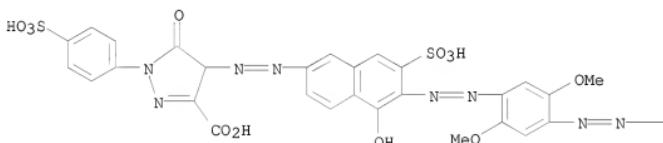


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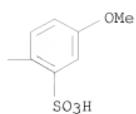


RN 852910-01-1 CAPLUS  
CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-methoxy-2-sulfophenyl]diazenyl]phenyl]diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

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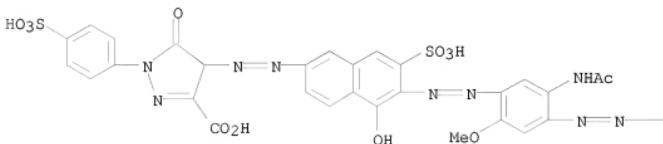
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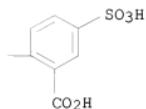
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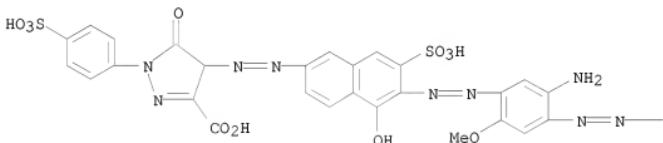
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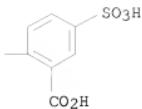


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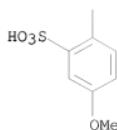
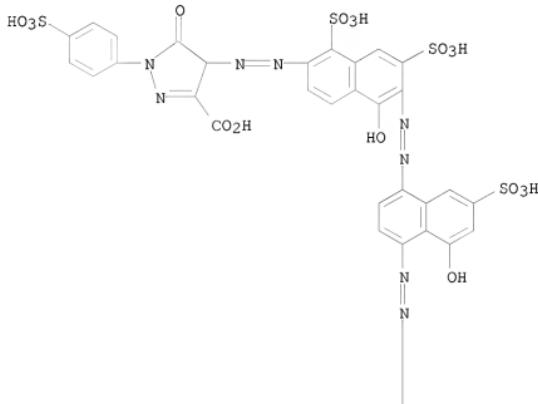
CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[5-amino-4-[2-(2-carboxy-4-sulfophenyl)diazenyl]-2-methoxyphenyl]diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

PAGE 1-A



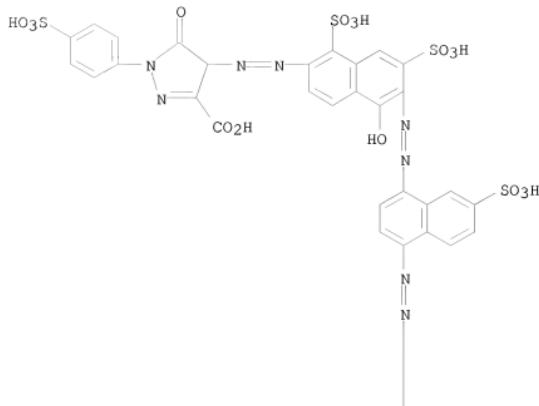


RN 852910-04-4 CAPLUS  
 CN 1H-Pyrazole-3-carboxylic acid, 4,5-dihydro-4-[2-[5-hydroxy-6-[2-[5-hydroxy-4-[2-(4-methoxy-2-sulfophenyl)diazenyl]-7-sulfo-1-naphthalenyl)diazenyl]-1,7-disulfo-2-naphthalenyl)diazenyl]-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

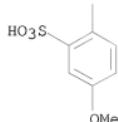


RN 852910-05-5 CAPLUS  
 CN 1H-Pyrazole-3-carboxylic acid, 4,5-dihydro-4-[2-[5-hydroxy-6-[2-[4-[2-(4-methoxy-2-sulfophenyl)diazenyl]-7-sulfo-1-naphthalenyl)diazenyl]-1,7-disulfo-2-naphthalenyl)diazenyl]-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

PAGE 1-A



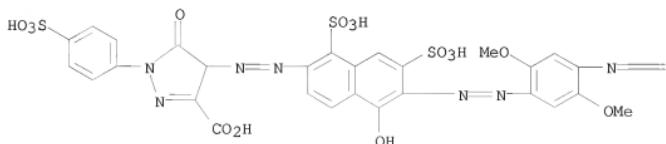
PAGE 2-A

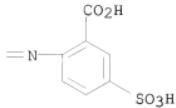


RN 852910-06-6 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(2-carboxy-4-sulfophenyl)diaz恒y]l]-2,5-dimethoxyphenyl]diaz恒y]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diaz恒y]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

PAGE 1-A

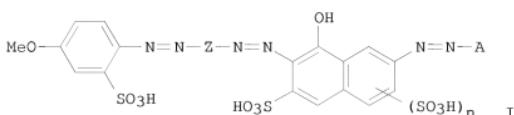




OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD  
 (5 CITINGS)  
 REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2003:913245 CAPLUS  
 DOCUMENT NUMBER: 139:382775  
 TITLE: Trisazo dyes for ink jet printing  
 INVENTOR(S): Mistry, Prahalad Manibhai; Bradbury, Roy  
 PATENT ASSIGNEE(S): Avecia Limited, UK  
 SOURCE: PCT Int. Appl., 22 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003095563	A1	20031120	WO 2003-GB2007	20030508
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003230002	A1	20031111	AU 2003-230002	20030508
EP 15052620	A1	20050216	EP 2003-722842	20030508
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2005525449	T	20050825	JP 2004-503562	20030508
US 20050200671	A1	20050915	US 2004-513472	20041109
US 7041161	B2	20060509		
PRIORITY APPLN. INFO.:			GB 2002-10824	A 20020511
OTHER SOURCE(S):	MARPAT	139:382775	WO 2003-GB2007	W 20030508
GI				



AB Disclosed in a composition comprising a liquid medium and a black trisazo dye (1);

A = pyrazolonyl group; Z = optionally substituted phenylene or naphthylene; n is 0 or 1) or a salt thereof wherein the medium comprises an organic solvent. Inks comprising such compns. have good storage stability and low tendency to block jet-printing nozzles, while prints and images from these compns. have good optical d. and resistance to fading. In an example, 2-sulfo-4-methoxyaniline->2,5-dimethoxyaniline was prepared and diazotized and coupled with gamma acid to give a disazo dye. This intermediate was diazotized and coupled with 1-(4-sulfophenyl)-5-pyrazolone-3-carboxylic acid to provide a trisazo dye.

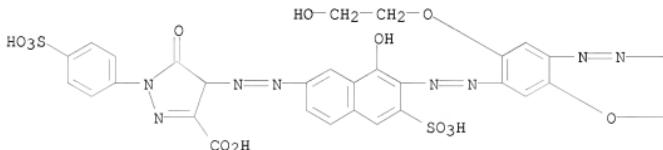
IT 624742-55-8

RL: TEM (Technical or engineered material use); USES (Uses)  
(dye; black trisazo dyes for jet printing inks)

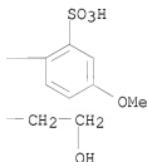
RN 624742-55-8 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[7-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(4-methoxy-2-sulfophenyl)diazenyl]phenyl]diazenyl]-8-hydroxy-6-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

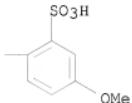
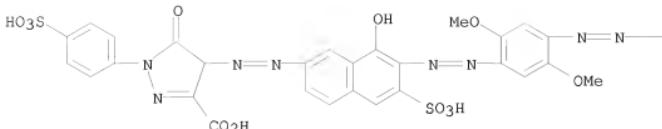


IT 624742-54-7P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(dye; production of black trisazo dyes for jet printing inks)

RN 624742-54-7 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[7-[2-[2,5-dimethoxy-4-[2-(4-methoxy-2-sulfophenyl)diazenyl]phenyl]diazenyl]-8-hydroxy-6-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

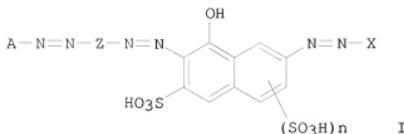


OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD  
 (6 CITINGS)  
 REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2003:913244 CAPLUS  
 DOCUMENT NUMBER: 139:396968  
 TITLE: Trisazo dyes for ink jet printing  
 INVENTOR(S): Mistry, Prahalad Manibhai; Bradbury, Roy  
 PATENT ASSIGNEE(S): Avecia Limited, UK  
 SOURCE: PCT Int. Appl., 30 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003095562	A1	20031120	WO 2003-GB1981	20030508
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003227918	A1	20031111	AU 2003-227918	20030508
EP 1506261	A1	20050216	EP 2003-725383	20030508
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2005529990	T	20051006	JP 2004-503561	20030508
US 20050217535	A1	20051006	US 2004-513750	20041109
US 7052538	B2	20060530		
PRIORITY APPLN. INFO.:			GB 2002-10824	A 20020511
			WO 2003-GB1981	W 20030508

OTHER SOURCE(S): MARPAT 139:396968



AB Disclosed is a composition comprising a liquid medium and black trisazo dye I  
(A)

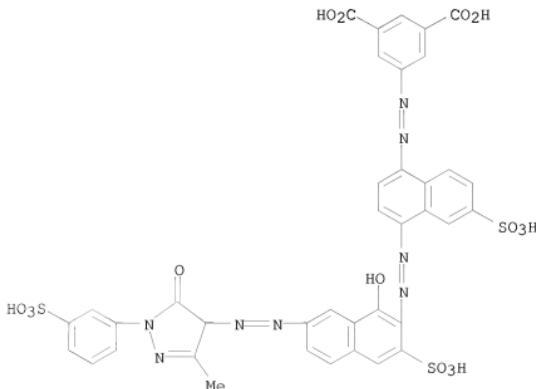
= optionally substituted Ph or naphthyl provided A is not  
2-sulfo-4-methoxyphenyl; X = pyrazolonyl group; Z = optionally substituted  
phenylene or naphthylene; n = 0, 1) wherein the liquid medium comprises an  
organic solvent. Inks comprising said compns. have good storage stability  
and low tendency to block jet-printing nozzles, while prints and images  
from these compns. have good optical d. and resistance to fading. In an  
example, 5-aminoisophthalic acid→1-naphthylamine was prepared and  
diazotized and coupled with gamma acid. The resulting disazo dye was then  
diazotized and coupled with 1-phenyl-5-pyrazolone-3-carboxylic acid to  
give a trisazo dye (λ<sub>max</sub> 578 nm).

IT 625471-46-7P 625471-48-9P 625471-49-0P  
625471-50-3P 625471-51-4P 625471-52-5P  
625471-53-6P 625471-54-7P 625471-55-8P  
625471-56-9P 625471-57-0P 625471-58-1P  
625471-59-2P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(black dye; production of trisazo dyes for ink jet printing)

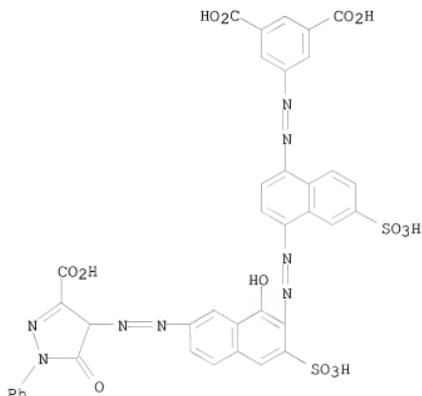
RN 625471-46-7 CAPLUS

CN 1,3-Benzenedicarboxylic acid, 5-[2-[4-[2-[7-[2-[4,5-dihydro-3-methyl-5-oxo-  
1-(3-sulfophenyl)-1H-pyrazol-4-yl]diazenyl]-1-hydroxy-3-sulfo-2-  
naphthalenyl]diazenyl]-6-sulfo-1-naphthalenyl]diazenyl]- (CA INDEX NAME)



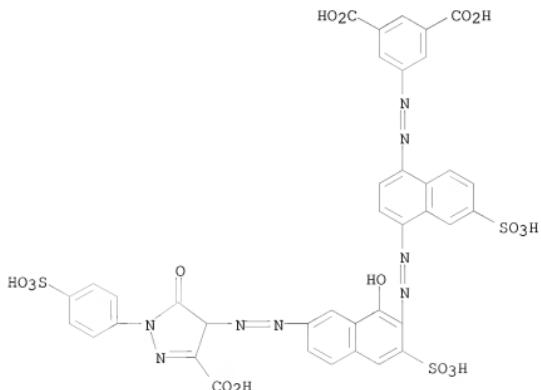
RN 625471-48-9 CAPLUS

CN 1,3-Benzenedicarboxylic acid, 5-[2-[4-[2-[7-[2-(3-carboxy-4,5-dihydro-5-oxo-1-phenyl-1H-pyrazol-4-yl)diazenyl]-1-hydroxy-3-sulfo-2-naphthalenyl]diazenyl]-6-sulfo-1-naphthalenyl]diazenyl]- (CA INDEX NAME)



RN 625471-49-0 CAPLUS

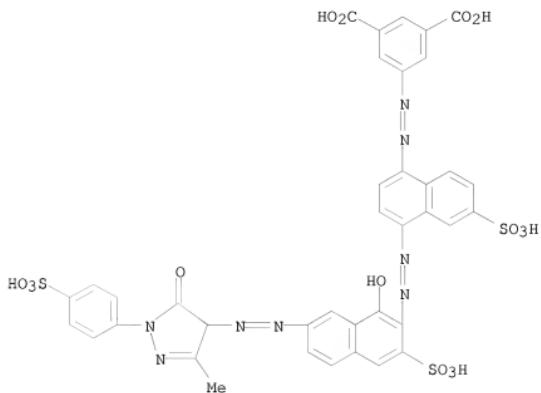
CN 1,3-Benzenedicarboxylic acid, 5-[2-[4-[2-[7-[2-(3-carboxy-4,5-dihydro-5-oxo-1-(4-sulfophenyl)-1H-pyrazol-4-yl)diazenyl]-1-hydroxy-3-sulfo-2-naphthalenyl]diazenyl]-6-sulfo-1-naphthalenyl]diazenyl]- (CA INDEX NAME)



RN 625471-50-3 CAPLUS

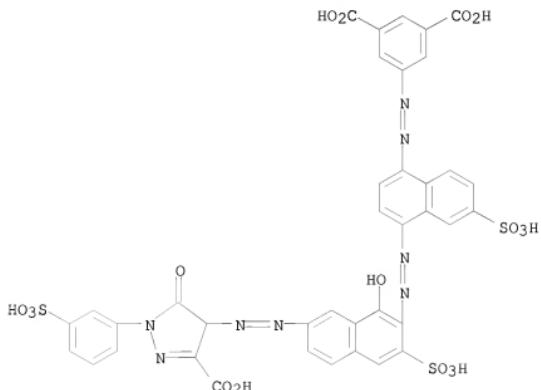
CN 1,3-Benzenedicarboxylic acid, 5-[2-[4-[2-[2-[4,5-dihydro-3-methyl-5-oxo-1-(4-sulfophenyl)-1H-pyrazol-4-yl]diazenyl]-1-hydroxy-3-sulfo-2-

naphthalenyl]diazenyl]-6-sulfo-1-naphthalenyl]diazenyl]- (CA INDEX NAME)



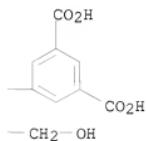
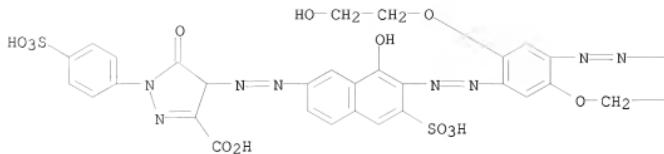
RN 625471-51-4 CAPLUS

CN 1,3-Benzenedicarboxylic acid, 5-[2-[4-[2-[7-[2-[3-carboxy-4,5-dihydro-5-oxo-1-(3-sulfo-1H-pyrazol-4-yl)-1H-pyrazol-4-yl]diazenyl]-1-hydroxy-3-sulfo-2-naphthalenyl]diazenyl]-6-sulfo-1-naphthalenyl]diazenyl]- (CA INDEX NAME)

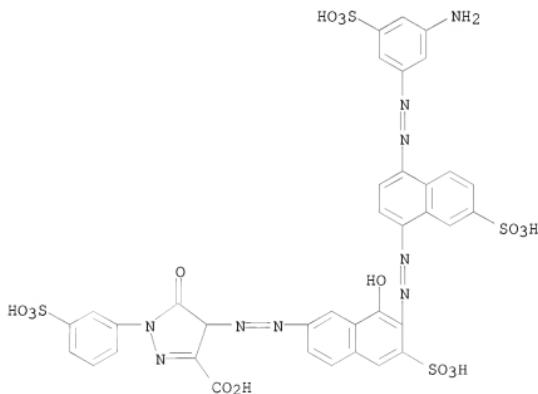


RN 625471-52-5 CAPLUS

CN 1,3-Benzenedicarboxylic acid, 5-[2-[4-[2-[7-[2-[3-carboxy-4,5-dihydro-5-oxo-1-(4-sulfo-1H-pyrazol-4-yl)-1H-pyrazol-4-yl]diazenyl]-1-hydroxy-3-sulfo-2-naphthalenyl]diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]- (CA INDEX NAME)

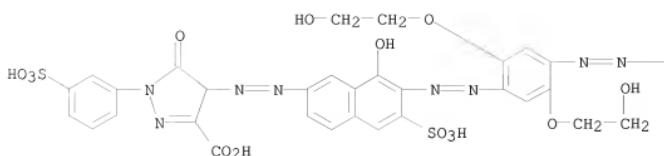


RN 625471-53-6 CAPLUS  
 CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[7-[2-[4-[2-(3-amino-5-sulfophenyl)diazenyl]-7-sulfo-1-naphthalenyl]diazenyl]-8-hydroxy-6-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(3-sulfophenyl)- (CA INDEX NAME)

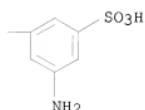


RN 625471-54-7 CAPLUS  
 CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[7-[2-[4-[2-(3-amino-5-sulfophenyl)diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-8-hydroxy-6-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(3-sulfophenyl)- (CA INDEX NAME)

PAGE 1-A

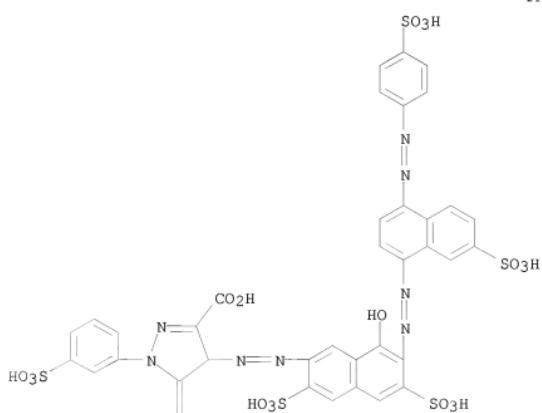


PAGE 1-B



RN 625471-55-8 CAPLUS  
CN 1H-Pyrazole-3-carboxylic acid, 4,5-dihydro-4-[2-[8-hydroxy-3,6-disulfo-7-[2-[7-sulfo-4-[2-(4-sulfophenyl)diazenyl]-1-naphthalenyl]diazenyl]-2-naphthalenyl]diazenyl]-5-oxo-1-(3-sulfophenyl)- (CA INDEX NAME)

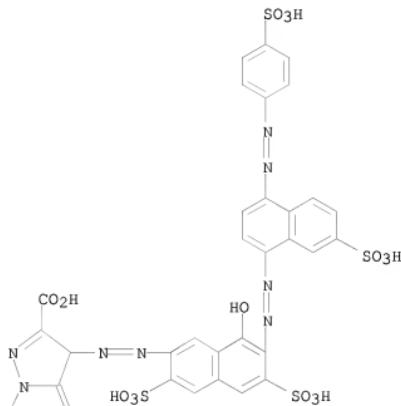
PAGE 1-A





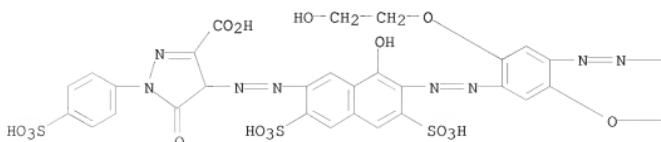
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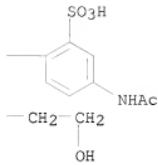
CN 1H-Pyrazole-3-carboxylic acid, 4,5-dihydro-4-[2-[8-hydroxy-3,6-disulfo-7-[2-[7-sulfo-4-[2-(4-sulfophenyl)diazenyl]-1-naphthalenyl]diazenyl]-2-naphthalenyl]diazenyl]-5-oxo-1-phenyl- (CA INDEX NAME)



RN 625471-57-0 CAPLUS

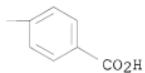
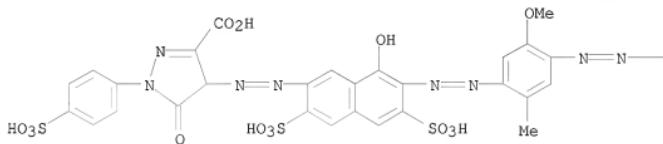
CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[7-[2-[4-[2-[4-(acetylamino)-2-sulfophenyl]diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-8-hydroxy-3,6-disulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)





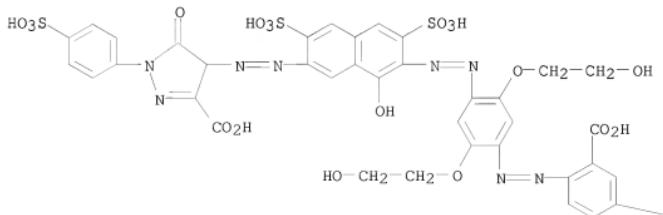
RN 625471-58-1 CAPLUS

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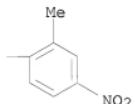
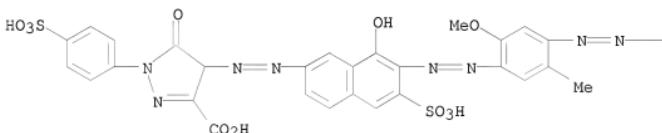
RN 625471-59-2 CAPLUS

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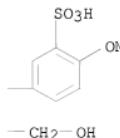
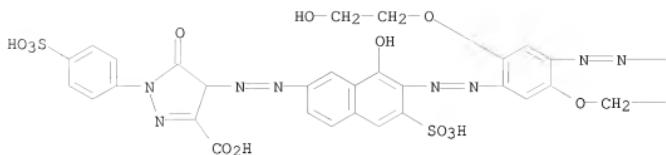


— NHAc

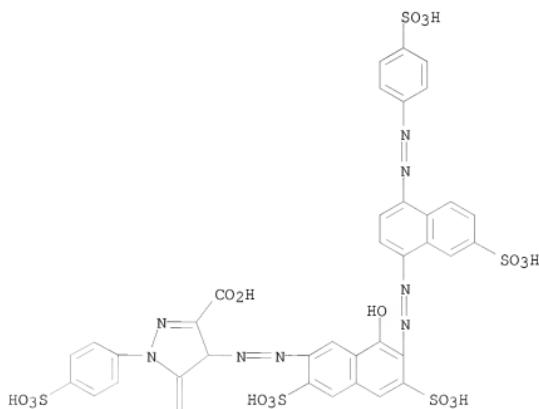
IT 625471-60-5 625471-61-6 625471-62-7  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (black dye; trisazo dyes for ink jet printing)  
 RN 625471-60-5 CAPLUS  
 CN 1H-Pyrazole-3-carboxylic acid, 4,5-dihydro-4-[2-[8-hydroxy-7-[2-[2-methoxy-5-methyl-4-[2-(2-methyl-4-nitrophenyl)diazenyl]phenyl]diazenyl]-6-sulfo-2-naphthalenyl]diazenyl]-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)



RN 625471-61-6 CAPLUS  
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OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD  
(1 CITINGS)  
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 1998:488144 CAPLUS  
DOCUMENT NUMBER: 129:190457  
ORIGINAL REFERENCE NO.: 129:38685a,38688a  
TITLE: Lightfast anion black dyes for paper, pulp, leather,  
cellulose fibers, inks, etc.  
INVENTOR(S): Inoue, Kaname; Imanaka, Hiroshi  
PATENT ASSIGNEE(S): Nippon Chemical Works Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10195320	A	19980728	JP 1997-3673	19970113
JP 4125801	B2	20080730		
PRIORITY APPLN. INFO.:			JP 1997-3673	19970113
OTHER SOURCE(S):	MARPAT	129:190457		
GI				

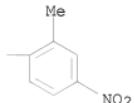
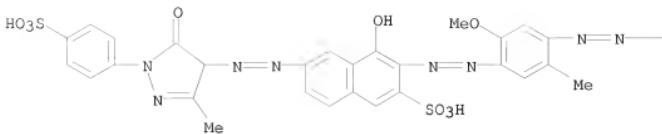
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The title dyes are I (or metal complexes thereof), wherein R1, R2 = C1-4 alkyl, alkoxy, OH, nitro, halogen, cyano, CF<sub>3</sub>, SO<sub>3</sub>H, SO<sub>2</sub>R<sub>5</sub>, SO<sub>2</sub>NR<sub>6</sub>R<sub>7</sub>, CO<sub>2</sub>H, CONR<sub>8</sub>R<sub>9</sub>; R3 = H, C1-4 alkyl, alkoxy, OH, C1-3 dialkylamino, NHCO<sub>10</sub>; R4 = H, C1-3 alkyl; m = 0-3; n = 1, 2; K = coupling component II, III or IV when n = 1 and V, VI or VII when n = 2; R5 = C1-4 alkyl; R6-9 = H, C1-4 alkyl; R10 = amino, C1-3 alkyl; R11 = C1-3 alkyl, alkoxy; R12 = C1-3 alkyl, acetyl, carbonylaminio; a, d, e, f, g = 1-2; X = direct bond, alkylene-carbonyl; b = 1-3; c = 0-1; R14 = C1-3 alkyl, alkoxy, halogen; C15 = C1-3 alkyl, alkoxy, halogen; R15 = C1-3 alkyl, carbonyl, carbomethyl; R16, R17 = H, C1-3 alkyl; A = CO, C1-4 alkylene; R18 = C1-4 alkylamine, C1-4 alkanolamine, aromatic amine, OH. *P*-nitroaniline was diazotized, coupled with 2,5-dimethoxyaniline, the coupling product diazotized, further coupled with  $\gamma$  acid, the coupling product diazotized, and coupled with m-phenylenediamine-4-sulfonic acid to obtain a desired dye.

IT 211809-50-6P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(lightfast anion black dyes for paper, pulp, leather, cellulose fibers,  
and inks)

RN 211809-50-6 CAPLUS

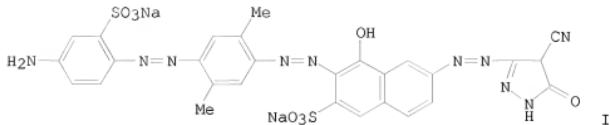
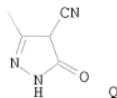
CN 2-Naphthalenesulfonic acid, 6-[2-[4,5-dihydro-3-methyl-5-oxo-1-(4-sulfophenyl)-1H-pyrazol-4-yl]diazenyl]-4-hydroxy-3-[2-methoxy-5-methyl-4-[2-(2-methyl-4-nitrophenyl)diazenyl]phenyl]diazenyl]-(CA INDEX NAME)



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD  
(3 CITINGS)

L9 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1990:38338 CAPLUS  
 DOCUMENT NUMBER: 112:38338  
 ORIGINAL REFERENCE NO.: 112:6621a,6624a  
 TITLE: Inks containing azo dyes with cyanopyrazolinone groups  
 for jet printing  
 INVENTOR(S): Sakaeda, Takeshi; Suga, Yuko; Shirota, Katsuhiro  
 PATENT ASSIGNEE(S): Canon K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01135880	A	19890529	JP 1987-294035	19871124
PRIORITY APPLN. INFO.:			JP 1987-294035	19871124
GI				



AB The title inks, anticlogging with good storage stability, comprise  $\geq 1$  of dyes containing structural unit Q in the mol. Thus, a composition of compound I 4, diethylene glycol 30, and H<sub>2</sub>O 66% was anticlogging and storage-stable and produced light- and water-resistant prints on a variety of papers.

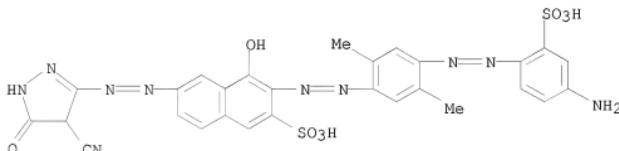
IT 124673-71-8

RL: USES (Uses)

(inks containing, black, for jet-printing)

RN 124673-71-8 CAPLUS

CN 2-Naphthalenesulfonic acid, 3-[2-[4-[2-(4-amino-2-sulfophenyl)diazenyl]-2,5-dimethylphenyl]diazenyl]-6-[2-(4-cyano-4,5-dihydro-5-oxo-1H-pyrazol-3-yl)diazenyl]-4-hydroxy-, sodium salt (1:2) (CA INDEX NAME)



● 2 Na

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD  
(1 CITINGS)

L9 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 1964:462105 CAPLUS  
DOCUMENT NUMBER: 61:62105  
ORIGINAL REFERENCE NO.: 61:10810c-h,10811a-b  
TITLE: Metalized dis- and trisazo reactive dyes  
INVENTOR(S): Andrew, Herbert F.; Baker, Ronald  
PATENT ASSIGNEE(S): Imperial Chemical Industries Ltd.  
SOURCE: 20 pp.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

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GB 951471	19640304	GB 1961-19080	19610526
US 3207746	19650921	US 1962-194173	19620511
PRIORITY APPLN. INFO.:		GB	19610526

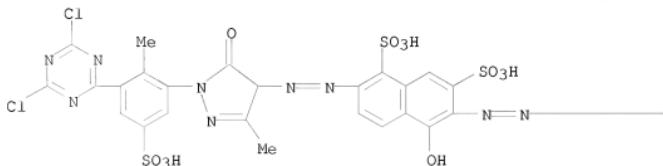
 GI For diagram(s), see printed CA Issue.
 AB The title compds. contain 0.5, 1, or 2 metal atoms per mol. and are less substantive than some polyazo direct dyes thereby reducing the staining of adjacent undyed or different colored areas during washing of cellulosic textiles dyed with the compds. Cu or Co complexes were prepared from compds. of the general formula I, where A is H or NaO3S, and X is either (1) a triazinylamino group containing two Cl substituents or one Cl and one sulfonated anilino group, or (2) a 1-phenyl-5-pyrazolonylazo group bearing a triazinylamino group substituted as under 1. Thus, 2,5-(HO3S)2C6H3NH2 (II) was diazotized and coupled in alkaline medium with 1,2,5,7-Cl(H2N)(HO)C10H4SO3H (III) and the product diazotized and coupled in alkaline medium with 2,5,1,7-H2N(HO)C10H4(SO3H)2 (IV), yielding a disazo compound, which was copperized by boiling for .apprx.1 hr. in an aqueous solution containing 2% NaOH, 2% glycerol, and 1.5 moles CuSO4, the Cl group being replaced by an OH group under these conditions. A solution containing the product 10.2 and H2O 200 was added gradually to a suspension of cyanuric chloride (V) 2.22, H2O 27, and ice 50 parts at 0-5° and pH 6.5-7.0, the pH being maintained by addition of Na2CO3 solution 3-NaO3SC6H3NET2 (VI) 4.7 and NaHSO4 0.3 were added, the solution poured into Me2CO, precipitating I (A = NaO3S, X = dichlorotriazinylamino), which was filtered, mixed with VI 1.88 and NaHSO4 0.12 part and dried. It dyed cotton light- and wetfast green shades. Similarly other I were prepared (reactants, metal, and shade given): (II → III) → IV, V, 3-NaO3SC6H4NH2 (VII), Co, blue (the Cu complex of (II → III) → IV was prepared, demetalized by stirring 18 hrs. at 20-5° in concentrated HCl, and treated with neutral aqueous CoCl2 at 95° for 18 hrs.); [(II → III) → IV] → 1-(2-methyl-3-amino-5-sulfonylphenyl)-3-methyl-5-pyrazolone (VIII), V, 3,5-(HO3S)2C6H8NH2 (IX), Cu, yellowish green; [(II → III) → IV] → 2,5,7-H2N(HO)C10H5SO3H (X) → VIII, V, IX, Cu, green. Either 3,4-HO3S(C6H4NH)2 or the 4,3-isomer was coupled with III and the products coupled with 3,6,2- or 6,8,2(HO3S)2C10H5OH, the AcNH group being deacetylated and the Cl group being replaced by OH during subsequent alkaline metalization. The Cu or Ni complexes of XI, where Y or Z is NaO3S, the other being H, were either (1) condensed with V, further condensed with VII, and treated with pyridine (XII) or mercaptobenzothiazole (XIII) or (2) coupled with a pyrazolone compound containing a 1-(3-aminophenyl) group, condensed with V, and further condensed with IX. Dyes prepared from the XI type intermediate were (reactants, metal, and shade given): [2,5-HO3S(AcNH)C6H3NH2 (XIV) → III] → 6,8,2-(HO3S)2C10H5OH (XV), V, Ni, blue (prepared from demetalized Cu complex); (XIV → III) → XV, V, VII, treated with XII, Cu, green; [2,4-HO3S(AcNH)C6H3NH2 (XVI) → III] → 3,6,2-(HO3S)2C10H5OH (XVII), V, VII, treated with XIII, Cu, bluish green; [(XIV → III) → XVI] → XVII, V, Cu, yellowish green; [(XIV → III) → XV] → VIII, V, Cu, yellowish green; [(XIV → III) → XV] → 1-(3-aminophenyl)-5-pyrazolone-3-carboxylic acid, V, IX, Cu, yellowish green. Other dis- and trisazo reactive dyes containing one or two chlorotriazinyl groups were prepared (reactants, metal, and shade given): [(2-HO3SC6H4NH2 (XVIII) → III] → IV] → VIII, V, 2,4-HO2C(HO3S)C6H3NH2, Cu, yellowish green; [(XVIII → III) → IV] → VIII, V, VII, Cu, green; [(2,5-HO(HO3S)C6H3NH2 → III] → IV] → 1-(2-methyl-3-(4,6-dichlorotriazin-2-ylamino)-5-sulfonylphenyl)-3-methyl-5-pyrazolone, Cu (2 atoms/mol.), green; (XIV → III) → 8,5,7,1-H2N(HO3S)2C10H4OH, V, Cr (prepared from demetalized Cu complex), gray green; [(XIV → III) → IV, V] → 1-(3-sulfonylphenyl)-5-pyrazolone-3-carboxylic acid, Cu, green; (XIV → III) → IV, V, 3-HO3SC6H4NHMe, V, Cu, green (bluish green before the last condensation with V):  
 IT 859452-14-5, 1,7-Naphthalenedisulfonic acid,

6-[[1-chloro-5-hydroxy-6-[(2-hydroxy-5-sulfophenyl)azo]-7-sulfo-2-naphthyl]azo]-2-[[1-[3-(4,6-dichloro-s-triazin-2-yl)-5-sulfo-o-tolyl]-3-methyl-5-oxo-2-pyrazolin-4-yl]azo]-5-hydroxy-  
(reaction product with Na N,N-diethylmetanilate, Cr complex)

RN 859452-14-5 CAPLUS

CN 1,7-Naphthalenedisulfonic acid, 6-[2-[1-chloro-5-hydroxy-6-[2-(2-hydroxy-5-sulfophenyl)diazenyl]-7-sulfo-2-naphthalenyl]diazenyl]-2-[2-[1-[3-(4,6-dichloro-1,3,5-triazin-2-yl)-2-methyl-5-sulfophenyl]-4,5-dihydro-3-methyl-5-oxo-1H-pyrazol-4-yl]diazenyl]-5-hydroxy- (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

